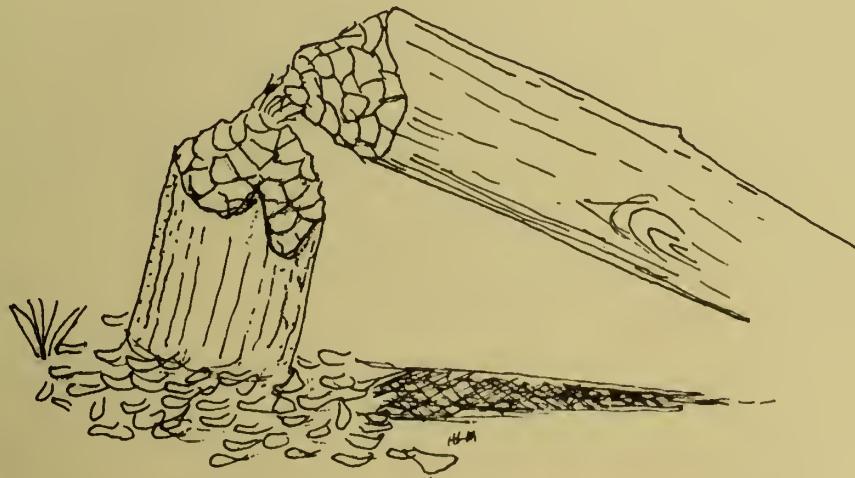
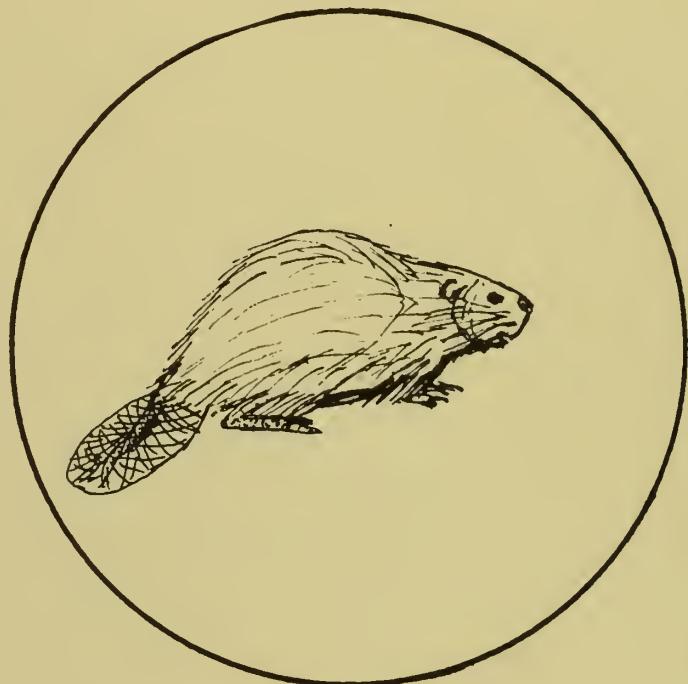




1975
**BEAVER DAMAGE
SURVEY**

Georgia Forestry Commission

A. R. SHIRLEY, Director



PREPARED BY: JOHN GODBEE
TERRY PRICE

RECEIVED

DEC. 12 1994

DOCUMENTS
UCA LIBRARIES

ERRATA - 1975 GEORGIA FORESTRY COMMISSION BEAVER SURVEY

Due to computer error in dropping the seventh whole number in the below specified counties, these corrections should be made.

Page 3, Paragraph 2: The estimated total value of damaged timber was \$66,056,051.

Table 1, Pages 8 - 10:

		Value in Dollars				
		Pine	Hardwood	Total		
District	County	Pulpwood	Sawtimber	Pulpwood	Sawtimber	Value
10	Appling		\$ 1,541,600			\$ 2,622,400
	Dist. Total		\$ 1,853,692			\$ 3,292,030
11	Glynn		\$ 1,228,500			\$ 1,975,000
	Long				\$ 1,344,000	\$ 3,308,600
	Dist. Total		\$ 2,981,225		\$ 1,954,800	\$ 7,688,580
13	Screven		\$ 1,071,600			\$ 2,107,800
	Dist. Total		\$ 1,712,949			\$ 3,321,701
16	Laurens		\$ 1,589,160			\$ 2,954,710
	Montgomery	\$ 1,471,500	\$ 3,307,060			\$ 5,146,060
	Treutlen	\$ 1,161,000	\$ 1,968,000			\$ 3,190,750
	Wheeler	\$ 2,531,250	\$ 3,210,300			\$ 5,897,550
	Dist. Total	\$ 7,272,487	\$ 11,463,395			\$ 20,174,507
17	Monroe				\$ 1,008,000	\$ 1,299,980
	Dist. Total				\$ 2,354,740	\$ 4,247,650
18	Twiggs				\$ 1,239,000	\$ 2,363,250
	Washington		\$ 1,069,200		\$ 1,692,600	\$ 4,154,400
	Wilkinson				\$ 1,903,200	\$ 2,431,200
	Dist. Total		\$ 2,415,175		\$ 5,842,560	\$ 11,069,960
	State Total	\$14,740,497	\$26,348,188		\$18,879,592	\$66,056,051

TABLE OF CONTENTS

	<u>Pg.</u>
List of Tables	ii
List of Figures	ii
Introduction	1
Survey Methods	2
Results.	3
Control	4
Literature Cited	24

LIST OF TABLES

1. Volume of Timber Damage by County
2. Estimated Acres Inundated and Average Volume Per Acre
3. Figures Used for Computation of Value of Damaged Timber
4. Summary of Landowner Activities
5. Summary of Beaver Damage Control Efforts

LIST OF FIGURES

1. Beaver Present in County
2. Counties Reporting Beaver Caused Problems
3. Total Acres Inundated by District
4. Counties Beaver Trapped for Fur
5. Counties Reporting Benefits Exceed the Damages
6. Sample Beaver Damage Report Form

1975 BEAVER DAMAGE SURVEY

GEORGIA FORESTRY COMMISSION

INTRODUCTION

The beaver (Caster canadensis) is the largest North American rodent, weighing up to 50 pounds. It has a broad flat scaly tail, long front teeth, a rich brown fur and webbed hind feet. Beavers are vegetarians. They feed on leaves, twigs, and stems of small bushes and trees surrounding lakes and streams. Preferred summer foods include lespedeza, goldenrod, blackberry, honeysuckle, tearthumb, dog fennel, ludwigia, alder, river birch, black gum, sweetgum and dogwood. Winter foods include sweetgum, yellow poplar, pine, hornbeam, willow, dogwood and alder. In general, they are opportunistic feeders taking vegetation seasonally most abundant. In summer, they are primarily herbaceous; in winter, their diet is predominantly composed of woody material (4).

Beaver cause damage by cutting timber and crops such as corn, sugarcane, fruit and nut trees, and flooding bottomland forest, farmlands and roads. One family maintains a "home" dam and from one to several minor dams above and below it. The number depends on stream conditions and the length of time the family has been in the area. Dams occur most frequently away from larger streams and lakes, but these areas may supply many of the beavers which move into problem areas (1, 2).

Although the beaver has become a pest and caused considerable damage in many places, it has been beneficial in others. Control of erosion by slowing run-off, and creation of waterholes and ponds for livestock and game and use of ponds for fish production, ducks and irrigation are some of the many benefits of properly managed beaver populations.

Georgia farms and forests, especially in the Piedmont, are increasingly threatened by flooding created by rapidly expanding beaver populations (Fig. 1). The Georgia Forestry Commission and other land managing agencies have received reports and complaints from forest landowners concerning timber damage done by beavers (Fig. 2) (Tables 1, 4). As a result of complaints, the Georgia Forestry Commission conducted surveys of beaver damage in 1960 and 1967. Continuous growth of the beaver population prompted initiation of this survey in 1975.

The survey results are not a beaver population study. However, they provide insight into the current beaver situation in Georgia. Some counties showing only slight or no damage might have losses a more intensive survey would have revealed.

SURVEY METHODS

This survey was conducted on a county basis by local Georgia Forestry Commission personnel and management foresters in conjunction with the Soil Conservation Service, Game and Fish Division of the Department of Natural Resources, University of Georgia Cooperative Extension Service, and others. While the survey was carried out in a variety of ways, the primary objective was obtaining the most accurate information possible on questionnaires from each county. Questionnaires were distributed to members of the various agencies. After a period of time, a single copy representing the combined efforts of all agencies was developed. Field work was completed in October, 1975. A sample questionnaire is included in this report (Fig. 6).

RESULTS

Between the 1967 and 1975 survey, the area of damage has increased by 128 percent with approximately 287,700 acres in 156 counties presently inundated (Fig. 3).

Estimated volumes of timber damaged and estimated values of this timber are listed in Table 1. Volume figures were computed from figures listed in Table 2, providing acres inundated and average stocking per acre. Value of damaged timber was computed using average prices per district in each size class and is listed in Table 3. An estimated volume of 2,808,998 cords of pulpwood and 1,036,574 MBF (thousand board feet) of sawtimber was reported damaged. The estimated total value of damaged timber was \$45,056,051.

Heaviest timber losses were reported in the Piedmont and Coastal Plain regions. Many reports listed damage only to non-commercial timber lands. Pastures (11,838 acres) and croplands (6,236 acres) were frequently listed as flooded. There were reports of inundated county roads, utility and railroad right-of-ways, pond spillways and dams in urban areas. A total of 258,489 acres of commercial timber land was reported along with an additional 4,500 acres in timber reproduction. Timber lands accounted for 91 percent of the total inundated acres. Most counties reported landowners who desired to keep beaver for such benefits as increased wildlife habitat (duck-fish ponds), waterholes for irrigation, livestock and flood control.

The 1960 and 1967 surveys reported most beaver activity had been established from 1950 to 1960. Older established dams were reported as far back as the 1930's (3). Table 4 provides the approximate number of years beavers have been established in the districts. Beaver activity has continued to increase since the initial surveys. The total number of damage reports (landowners with

problems) increased from 519 in 1960 to 2,632 in 1967 and to 9,988 in 1975. Acreage affected figures for the three surveys were 15,702 acres in 1960, 126,409 acres in 1967, and 287,700 acres in 1975.

Observations concerning control measures are provided in Table 5. Trapping was the control measure most frequently reported and accounted for 35 percent of the total effort. In addition, 75 counties reported beaver trapped for fur (Fig. 4). Dynamiting, shooting and use of drain pipes were ranked behind trapping as types of control effort most frequently used. Trapping (18 percent) and dynamiting (6 percent) were listed as the control efforts most successful. Unsuccessful control (41 percent) and no response (25 percent) were most frequently listed.

Of approximately 10,000 landowners with beaver problems, 32 percent have registered complaints with various agencies. Approximately 700 or 7 percent have initiated some type of control program.

Benefits derived from beavers were thought to offset damages in 38 counties (Fig. 5). These assumptions constitute opinions of the County Committees. Benefit-damage ratios will vary within each county dependent on landowner circumstances. Benefits most frequently listed were establishment of wildlife habitat for ducks, fish and erosion control by slowing run-off.

CONTROL

Control of beavers, by any recommended method, is time consuming and expensive. The best control approach, based on information collected in this survey, appears to be trapping combined with mechanical alteration of the animal's habitat, i.e. dynamiting and installation of drain pipes.

Two Georgia publications available listing techniques for trapping, etc. are:

1. Beaver and Muskrat Control, (not dated), published by Information Education Division, Georgia Game and Fish Division, Department of Natural Resources.
2. Beaver Control. David Almand, December 1966, Circular 565, published by UGA, Cooperative Extension Service.

Copies are available from the respective agencies. In addition, the Soil Conservation Service and the Department of Natural Resources, Game Management Section are currently surveying fresh water wetlands (including beaver ponds) throughout Georgia. This information should be available from respective agencies in the near future.



Bottomland Hardwoods Inundated by Beaver Dam Construction

Table 1.--Volume of Timber Damage by County

District & County	Volume of Timber Damage			Value in Dollars		
	Pulpwood	Pine	Sawtimber	Pine	Sawtimber	Hardwood
	Cords	MBF	Cords	MBF	MBF	MBF
<u>District 1</u>						
Bartow	95	26	--	\$ 571	\$ 922	--
Catoosa	--	--	263	75	--	\$ 2,187
Chattooga	28	4	28	6	158	174
Dade	--	--	336	126	--	583
Floyd	928	160	448	144	5,568	3,654
Gordon	29	6	--	--	5,760	4,176
Harrison	4,650	1,400	7,600	2,100	771	--
Paulding	2,945	930	7,560	1,890	27,900	22,800
Polk	9,130	1,870	1,640	600	50,400	60,900
Walker	256	22	79	20	54,780	54,810
Total	18,061	4,418	17,954	4,961	108,364	159,037
					53,860	143,381
						465,142
<u>District 2</u>						
Cherokee	--	--	--	--	--	--
Fannin	--	--	--	--	--	--
Gilmer	--	--	--	--	--	--
Murray	1,100	480	19	--	4,400	15,360
Pickens	75	--	--	--	300	608
Whitfield	--	--	143	41	--	--
Total	1,175	499	143	41	4,700	15,968
					285	1,013
						21,966
<u>District 3</u>						
Clayton	1,890	967	--	--	7,560	33,863
Cobb	250	83	--	--	1,000	2,887
DeKalb	--	--	--	--	--	--
Douglas	645	125	585	175	2,580	4,375
Fulton	1,380	420	1,210	590	5,520	14,700
Gwinnett	980	400	3,090	1,380	3,920	14,000
Rockdale	1,290	495	--	--	5,160	17,325
Total	6,435	2,490	4,885	2,145	25,740	87,150
					9,770	42,900
						165,560
<u>District 4</u>						
Carroll	--	23,000	5,250	--	69,000	105,000
Coweta	5,760	2,160	23,400	9,000	108,000	70,200
Heard	237	60	723	323	3,000	2,167
Meriwether	23,000	8,000	27,900	11,100	138,000	400,000
Troup	9	4	921	285	56	185
Total	29,006	10,224	75,944	25,958	174,038	511,185
					227,832	519,160
						1,432,215

Table 1 (Continued)

District & County	Volume of Timber Damage				Value in Dollars			
	Pine		Hardwood		Pine		Hardwood	
	Pulpwood	Cords	Sawtimber	MBF	Pulpwood	Cords	Sawtimber	MBF
<u>District 5</u>								
Butts	1,050	350	11,600	\$ 6,700	\$ 8,400	\$ 15,750	\$ 23,200	\$ 134,000
Fayette	2,680	540	14,520	4,200	21,440	24,300	29,040	84,000
Henry	11,615	4,255	--	--	92,920	191,475	--	--
Lamar	25,440	6,240	18,720	6,720	203,520	280,800	37,440	134,400
Newton	--	--	8,750	2,100	--	--	17,500	42,000
Pike	2,220	1,200	44,400	18,800	17,760	54,000	88,800	376,000
Spalding	370	175	3,782	985	2,960	7,875	7,565	19,700
Upson	1,920	660	16,400	8,000	15,360	29,700	32,800	160,000
Total	45,295	13,420	118,172	47,505	362,360	603,900	236,345	950,100
<u>District 6</u>								
Chattahoochee	20	30	30	23	160	1,350	91	342
Harris	45	21	17	7	356	967	52	99
Muscogee	64	58	43	33	510	2,623	130	495
Quitman	781	263	3,082	1,127	6,249	11,826	9,246	3,759
Randolph	1,045	456	5,989	2,279	8,362	20,502	17,968	44,226
Stewart	1,505	568	3,087	1,039	12,042	25,560	9,261	81,009
Talbot	9,400	3,500	55,250	22,100	75,200	157,500	165,750	62,455
Webster	838	484	5,437	2,246	6,702	21,771	16,312	331,500
Total	13,698	5,380	72,935	28,854	109,581	242,099	218,810	78,472
								1,003,288
<u>District 7</u>								
Crisp	3,080	990	1,699	581	24,640	59,400	5,095	14,513
Dooly	3,307	1,943	22,236	7,630	26,460	116,550	66,708	103,648
Macon	--	--	45,000	27,000	--	--	135,000	400,468
Marion	2,880	495	10,240	4,640	23,040	29,700	30,720	810,000
Schley	--	--	13,680	6,120	--	--	41,040	199,460
Sumter	6,816	1,633	15,900	4,500	54,528	97,980	153,000	194,040
Taylor	27,000	6,300	10,300	3,600	216,000	378,000	47,700	312,708
Total	43,083	11,361	119,555	54,071	344,668	681,630	32,400	90,000
								716,400
								2,736,724
<u>District 8</u>								
Ben Hill	720	400	2,775	1,424	11,520	26,800	8,325	28,500
Berrien	--	--	--	--	--	--	--	--
Brooks	2,340	1,230	--	37,440	82,410	--	--	--
Cook	--	--	64	23	--	192	460	119,850
Echols	82	29	--	1,312	1,943	--	--	652
Irwin	2,987	1,247	3,200	900	47,792	83,549	9,600	3,255
Lanier	--	--	--	--	--	--	--	158,941
Lowndes	445	145	--	7,120	9,715	--	--	--
Tift	1,080	440	3,570	750	17,280	29,480	10,710	16,835
Turner	396	216	1,670	860	6,336	14,472	5,010	72,470
Total	8,050	3,707	11,279	3,957	128,800	248,369	33,837	43,018
								490,166

Table 1 (Continued)

District & County	Volume of Timber Damage						Value in Dollars					
	Pulpwood	Pine	Sawtimber	Hardwood	Pulpwood	Sawtimber	Pine	Pulpwood	Sawtimber	Hardwood	Pulpwood	Sawtimber
	MBF	Cords	MBF	Cords	MBF	MBF	MBF	Cords	MBF	MBF	Cords	Total Value
District 12												
Atkinson	--	--	--	--	--	\$	--	\$	--	\$	--	\$
Bacon	--	--	--	--	--	--	--	--	--	--	--	--
Brantley	--	--	--	--	--	--	--	--	--	--	--	--
Charlton	--	--	--	--	--	--	--	--	--	--	--	--
Clinch	--	--	--	--	--	--	--	--	--	--	--	--
Coffee	1,900	640	--	--	--	39,900	46,080	--	--	--	85,980	--
Pierce	--	--	--	--	--	--	--	--	--	--	--	--
Ware	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,900	640	--	--	--	39,900	46,080	--	--	--	85,980	--
District 13												
Burke	--	--	--	--	450	11,800	47,120	--	4,020	12,600	--	75,540
Columbia	1,180	620	1,340	6,180	2,520	27,600	84,360	18,540	70,560	201,060	201,060	201,060
Emanuel	2,760	1,110	3,140	880	--	--	9,420	24,640	24,640	34,060	34,060	34,060
Glascock	--	--	3,000	1,050	--	--	9,000	29,400	29,400	38,400	38,400	38,400
Jefferson	--	--	--	--	--	--	--	--	--	--	--	--
Jenkins	--	--	--	--	--	54,384	204,653	--	--	259,037	259,037	259,037
Lincoln	5,438	2,693	--	--	12,400	29,640	--	--	--	42,040	42,040	42,040
McDuffie	1,240	390	--	2,520	960	--	7,560	--	26,880	34,440	34,440	34,440
Richmond	--	--	43,600	14,100	22,800	267,000	71,600	130,800	638,400	1,107,800	1,107,800	1,107,800
Sciven	26,700	860	1,120	280	330	8,600	21,280	3,360	9,240	42,480	42,480	42,480
Taliaferro	860	160	--	--	4,450	12,160	--	--	--	16,610	16,610	16,610
Warren	445	5,723	3,186	11,484	4,872	57,230	242,136	34,452	136,416	470,234	470,234	470,234
Wilkes	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,346	22,539	72,384	33,862	443,464	712,949	217,152	948,136	2,321,701	2,321,701	2,321,701	2,321,701
District 14												
Banks	11,800	2,500	5,650	2,050	70,800	65,000	16,950	41,000	41,000	193,750	193,750	193,750
Dawson	1,725	270	350	65	10,350	7,020	1,050	1,300	1,300	19,720	19,720	19,720
Forsyth	1	3	8	2	69	76	25	36	36	206	206	206
Franklin	34,920	12,240	19,000	4,800	209,520	318,240	57,000	96,000	96,000	680,760	680,760	680,760
Habersham	5,695	510	870	240	34,170	13,260	2,610	4,800	4,800	54,840	54,840	54,840
Hall	4,360	920	2,080	540	26,160	23,920	6,240	10,800	10,800	67,120	67,120	67,120
Hart	3,099	63	5,650	900	18,592	1,628	16,950	18,000	18,000	55,170	55,170	55,170
Lumpkin	272	82	--	1,632	2,132	--	--	--	--	3,764	3,764	3,764
Rabun	462	66	303	81	2,772	1,729	909	1,620	1,620	7,030	7,030	7,030
Stephens	15,225	2,100	1,155	560	91,350	54,600	3,465	11,200	11,200	160,615	160,615	160,615
Towns	1,300	250	580	150	7,800	6,500	1,740	3,000	3,000	19,040	19,040	19,040
Union	1,410	160	303	90	8,460	4,160	907	1,800	1,800	15,327	15,327	15,327
White	4,560	480	1,160	300	27,360	12,480	3,480	6,000	6,000	49,320	49,320	49,320
Total	84,839	19,644	37,109	9,778	509,035	510,745	111,326	195,556	195,556	1,326,662	1,326,662	1,326,662

Table 1 (Continued)

District & County	Volume of Timber Damage			Value in Dollars					
	Pine	Sawtimber	Hardwood	Pine	Sawtimber	Hardwood			
	Pulpwood	Cords	Pulpwood	Cords	Pulpwood	Pulpwood	Sawtimber	Sawtimber	Total Value
<u>District 15</u>									
Barrow	--	1,100	112	50	\$ 16,170	\$ 44,000	\$ 224	\$ 1,000	\$ 1,224
Clarke	2,695	2,880	680	680	6,336	8,800	5,760	13,600	79,530
Elbert	1,056	4,500	1,485	1,485	50,880	179,200	9,000	29,700	53,836
Greene	8,480	5,460	2,640	2,640			10,920	52,800	293,800
Jackson	--	--	1,180	370	--	--	2,360	7,400	9,760
Madison	640	115	1,060	390	3,840	4,600	2,120	7,800	18,360
Morgan	6,180	2,880	36,900	10,800	37,080	115,200	73,800	216,000	442,080
Oconee	7,020	1,755	4,800	1,320	42,120	70,200	9,600	26,400	148,320
Oglethorpe	10,400	3,120	126,000	44,000	62,400	124,800	252,000	880,000	1,319,200
Walton	5,150	1,450	52,000	20,500	30,900	58,000	104,000	410,000	602,900
Total	41,621	15,120	234,892	82,235	249,726	604,800	469,784	1,644,700	2,969,010
<u>District 16</u>									
Bleckley	8,843	1,417	15,125	5,250	132,637	116,235	75,625	105,000	429,497
Dodge	21,630	5,460	17,400	5,400	324,450	447,720	87,000	108,000	967,170
Laurens	66,120	19,380	29,750	11,250	991,800	589,160	148,750	225,000	1,954,710
Montgomery	98,100	40,330	22,500	12,750	471,500	307,060	112,500	255,000	1,146,060
Teal Fair	39,550	9,100	--	--	593,250	746,200	--	--	1,339,450
Treutlen	77,400	24,000	5,150	1,800	161,000	968,000	25,750	36,000	1,190,750
Wheeler	168,740	39,150	10,400	5,200	531,250	210,300	52,000	104,000	897,550
Wilcox	4,440	960	8,960	2,960	66,600	78,720	44,800	59,200	249,320
Total	484,833	139,797	109,285	44,610	3,272,487	3,463,395	546,425	892,200	8,174,507
<u>District 17</u>									
Bibb	203	173	1,900	740	1,823	11,557	7,600	31,080	52,060
Crawford	16,800	9,870	16,800	9,600	151,200	661,290	67,200	403,200	1,282,890
Houston	1,350	310	19,800	9,750	12,150	20,770	79,200	409,500	521,620
Jasper	2,520	1,950	9,790	5,280	27,720	157,950	48,950	205,920	440,540
Jones	3,030	1,530	4,450	1,550	27,270	102,510	17,800	65,100	212,680
Monroe	2,120	700	56,500	24,000	19,080	46,900	226,000	8,000	299,980
Peach	--	--	1,710	570	--	--	6,840	23,940	30,780
Putaski	4,200	550	18,200	10,400	63,000	45,100	91,000	208,000	407,100
Total	30,223	15,083	129,150	61,890	302,243	1,046,077	544,590	1,354,740	3,247,650
<u>District 18</u>									
Baldwin	1,455	780	3,400	1,440	16,005	63,180	17,000	56,160	152,345
Hancock	1,440	630	9,600	2,800	15,840	51,030	48,000	109,200	224,070
Johnson	5,400	1,875	46,080	21,600	59,400	151,875	230,400	842,400	1,284,975
Putnam	9,180	4,440	--	--	100,920	359,640	--	--	460,620
Twiggs	20,000	10,750	56,000	29,500	180,000	720,250	224,000	239,000	1,363,250
Washington	63,600	13,200	138,600	43,400	699,600	69,200	693,000	692,600	2,154,400
Wilkinson	--	--	105,600	48,800	--	--	528,000	903,200	1,431,200
Total	101,075	31,675	359,280	147,540	1,071,825	1,415,175	1,740,400	2,842,560	7,069,960
STATE	1,172,601	379,272	1,636,397	657,302	10,740,497	14,348,188	6,087,774	13,879,592	45,056,051

Table 2.--Estimated Acres Inundated^{1/} and Average Volume Per Acre^{2/}

District:	County	Pine				Hardwood			
		Total	Avg.	Stocking	Per Acre	Total	Avg.	Stocking	Per Acre
		Acres	Pulpwood	Sawtimber	MBF	Acres	Pulpwood	Sawtimber	MBF
District:	County	Inundated	Cords			Inundated	Cords		
1	Bartow	8	11.9	3.2	3/	--	7.9	1.7	
	Catoosa	--	13.9	3.1	3/	26	10.1	2.9	
	Chattooga	2	14.0	2.2		3	9.2	2.0	
	Dade	--	12.8	1.1	3/	28	12.0	4.5	
	Floyd	80	11.6	2.0		40	11.2	3.6	
	Gordon	3	9.5	1.9		--	8.9	1.4	
	Haralson	500	9.3	2.8		1,000	7.6	2.1	
	Paulding	310	9.5	3.0		900	8.4	2.1	
	Polk	1,100	8.3	1.7		200	8.2	3.0	
	Walker	20	12.8	1.1		10	7.9	2.0	
2	Cherokee	--	10.5	4.0		--	6.6	1.9	
	Fannin	--	11.1	3.4	3/	--	12.2	2.4	
	Gilmer	--	12.6	3.8		--	7.5	1.3	
	Murray	100	11.0	4.8		--	13.6	3.6	
	Pickens	10	7.5	1.9		--	6.7	1.9	
	Whitfield	--	14.9	5.2		15	9.5	2.7	
3	Clayton	225	8.4	4.3		--	9.6	4.5	
	Cobb	25	10.0	3.3		--	12.1	6.2	
	DeKalb	--	9.0	5.3		--	9.9	4.3	
	Douglas	50	12.9	2.5		50	11.7	3.5	
	Fulton	100	13.8	4.2		100	12.1	5.9	
	Gwinnett	100	9.8	4.0		300	10.3	4.6	
	Rockdale	150	8.6	3.3		--	7.2	1.2	
4	Carroll	--	10.4	1.4		2,500	9.2	2.1	
	Coweta	600	9.6	3.6		2,000	11.7	4.5	
	Heard	15	15.8	4.0		85	8.5	3.8	
	Meriwether	2,000	11.5	4.0		3,000	9.3	3.7	
	Troup	1	9.3	3.7		95	9.7	3.0	
5	Butts	100	10.5	3.5		1,000	11.6	6.7	
	Fayette	200	13.4	2.7		1,200	12.1	3.5	
	Henry	1,150	10.1	3.7		--	10.7	2.8	
	Lamar	2,400	10.6	2.6		1,600	11.7	4.2	
	Newton	--	9.4	2.3		700	12.5	3.0	
	Pike	200	11.1	6.0		4,000	11.1	4.7	
	Spalding	50	7.4	3.5		394	9.6	2.5	
	Upson	200	9.6	3.3		2,000	8.2	4.0	
6	Chattahoochee	5	4.0	6.0		4	7.6	5.7	
	Harris	5	8.9	4.3		2	8.6	3.3	
	Muscogee	11	5.8	5.3		6	7.2	5.5	
	Quitman	73	10.7	3.6		230	13.4	4.9	
	Randolph	134	7.8	3.4		651	9.2	3.5	
	Stewart	142	10.6	4.0		315	9.8	3.3	
	Talbot	1,000	9.4	3.5		8,500	6.5	2.6	
	Webster	118	7.1	4.1		591	9.2	3.8	
7	Crisp	40	11.2	3.6		215	7.9	2.7	
	Dooly	46	6.3	3.7		2,180	10.2	3.5	
	Macon	94	8.0	3.4		5,000	9.0	5.4	
	Marion	96	6.4	1.1		1,600	6.4	2.9	
	Schley	123	8.1	4.5		1,800	7.6	3.4	
	Sumter	129	9.6	2.3		1,500	10.6	3.0	
	Taylor	133	9.0	2.1		1,000	10.8	3.6	

Table 2 (Continued)

District:	County	Pine				Hardwood			
		Total	Avg.	Stocking	Per Acre	Total	Avg.	Stocking	Per Acre
		Acres	Inundated	Pulpwood	Sawtimber	Acres	Inundated	Pulpwood	Sawtimber
8	Ben Hill	100		7.2	4.0	250		11.1	5.7
	Berrien	--		10.6	4.0	--		15.4	4.1
	Brooks	300		7.8	4.1	--		13.6	4.4
	Cook	--		13.6	4.1	5		12.8	4.6
	Echols	10		8.2	2.9	--		12.3	3.5
	Irwin	290		10.3	4.3	200		16.0	4.5
	Lanier	--		6.9	3.0	--		16.9	4.5
	Lowndes	50		8.9	2.9	--		11.2	4.5
	Tift	100		10.8	4.4	300		11.9	2.5
	Turner	60		6.6	3.6	100		16.7	8.6
9	Baker	200		6.2	2.9	--		6.8	3.6
	Calhoun	--		8.9	3.1	--		11.0	3.8
	Clay	200		7.9	2.8	600		9.4	3.3
	Colquitt	150		9.1	4.6	150		8.1	3.0
	Decatur	150		9.2	4.1	--		9.8	5.2
	Dougherty	500		8.0	4.0	500		13.4	5.7
	Early	1,500		10.6	1.8	3,000		11.5	3.9
	Grady	50		7.6	5.2	150		7.7	4.5
	Lee	600		12.6	2.9	1,000		9.0	3.5
	Miller	50		14.6	1.2	150		7.2	3.2
	Mitchell	350		9.5	2.1	500		12.6	3.7
	Seminole	--		11.1	8.8	--		8.1	2.7
	Terrell	400		9.8	1.0	500		12.2	3.9
	Thomas	53		6.2	6.3	--		8.5	5.6
	Worth	700		7.0	5.9	1,200		8.6	3.5
10	Appling	4,000		12.7	4.7	2,000		11.2	4.0
	Bullock	--		8.8	6.2	--		11.2	4.4
	Candler	10		7.2	4.1	50		12.1	4.6
	Evans	200		5.6	3.7	300		18.6	5.9
	Jeff Davis	100		10.0	4.1	550		7.1	2.3
	Tattnall	500		10.6	4.3	250		16.0	4.8
	Toombs	150		14.5	3.1	50		13.7	3.9
	Wayne	--		12.9	4.4	--		9.8	4.5
11	Bryan	500		11.2	3.9	250		12.5	5.6
	Camden	125		11.6	5.0	50		16.4	4.7
	Chatham	--		12.6	10.3	--		13.8	4.0
	Effingham	--		9.2	4.5	50		11.6	4.5
	Glynn	3,000		12.0	6.3	500		11.8	4.6
	Liberty	150		8.9	4.6	200		12.5	4.5
	Long	3,000		10.4	4.7	7,000		13.9	6.4
	McIntosh	3,000		12.1	3.2	3,000		12.5	5.1
12	Atkinson	--		9.5	3.7	--		14.8	3.7
	Bacon	--		9.7	2.5	--		10.1	2.6
	Brantley	--		9.2	1.9	--		11.3	3.9
	Charlton	--		11.9	3.9	--		7.8	3.6
	Clinch	--		10.4	4.2	--		15.7	3.1
	Coffee	200		9.5	3.2	--		8.9	3.2
	Pierce	--		9.6	5.5	--		11.3	4.0
	Ware	--		9.1	3.0	--		14.4	3.3
13	Burke	--		7.4	1.3	--		9.7	3.3
	Columbia	100		11.8	6.2	100		13.4	4.5
	Emanuel	300		9.2	3.7	600		10.3	4.2
	Glascock	--		7.5	.8	200		15.7	4.4
	Jefferson	--		8.1	2.1	300		10.0	3.5
	Jenkins	--		8.6	2.1	--		16.5	7.8
	Lincoln	528		10.3	5.1	--		10.7	3.2
	McDuffie	100		12.4	3.9	--		10.2	2.7
	Richmond	--		11.0	3.1	200		12.6	4.8
	Screven	3,000		8.9	4.7	4,000		10.9	5.7
	Taliaferro	50		17.2	5.6	100		11.2	3.3
	Warren	50		8.9	3.2	--		9.9	3.1
	Wilkes	590		9.7	5.4	1,160		9.9	4.2

Table 2 (Continued)

District:	County	Pine				Hardwood			
		Total	Avg.	Stocking	Per Acre	Total	Avg.	Stocking	Per Acre
		Acres	Pulpwood	Sawtimber	MBF	Acres	Pulpwood	Sawtimber	MBF
Inundated	Inundated	Cords				Inundated	Cords		
14	Banks	1,000	11.8	2.5	500	11.3	4.1		
	Dawson	150	11.5	1.8	50	7.0	1.3		
	Forsyth	1	11.5	2.9	1	8.4	1.8		
	Franklin	3,600	9.7	3.4	2,000	9.5	2.4		
	Habersham	425	13.4	1.2	100	8.7	2.4		
	Hall	400	10.9	2.3	200	10.4	2.7		
	Hart	313	9.9	.2	500	11.3	1.8		
	Lumpkin	20	13.6	4.1	--	10.5	2.5		
	Rabun	35	13.23/	1.93/	30	10.13/	2.73/		
	Stephens	1,050	14.5	2.0	175	6.6	3.2		
	Towns	100	13.03/	2.5	50	11.63/	3.03/		
	Union	100	14.1	1.6	25	12.1	3.6		
	White	400	11.4	1.2	100	11.6	3.0		
15	Barrow	--	8.9	2.0	10	11.2	5.0		
	Clarke	275	9.8	4.0	200	14.4	3.4		
	Elbert	110	9.6	2.0	450	10.0	3.3		
	Greene	800	10.6	5.6	600	9.1	4.4		
	Jackson	--	10.8	3.6	100	11.8	3.7		
	Madison	50	12.8	2.3	100	10.6	3.9		
	Morgan	600	10.3	4.8	3,000	12.3	3.6		
	Oconee	650	10.8	2.7	400	12.0	3.3		
	Oglethorpe	800	13.0	3.9	10,000	12.6	4.4		
	Walton	500	10.3	2.9	5,000	10.4	4.1		
16	Bleckley	675	13.1	2.1	1,250	12.1	4.2		
	Dodge	2,100	10.3	2.6	2,000	8.7	2.7		
	Laurens	5,700	11.6	3.4	2,500	11.9	4.5		
	Montgomery	10,900	9.0	3.7	1,500	15.0	8.5		
	Telfair	3,500	11.3	2.6	--	12.0	5.0		
	Treutlen	6,000	12.9	4.0	500	10.3	3.6		
	Wheeler	13,500	12.5	2.9	1,000	10.4	5.2		
	Wilcox	600	7.4	1.6	800	11.2	3.7		
17	Bibb	25	8.1	6.9	200	9.5	3.7		
	Crawford	2,100	8.0	4.7	2,000	8.4	4.8		
	Houston	100	13.5	3.1	1,500	13.2	6.5		
	Jasper	300	8.4	6.5	1,100	8.9	4.8		
	Jones	300	10.1	5.1	500	8.9	3.1		
	Monroe	200	10.6	3.5	5,000	11.3	4.8		
	Peach	--	2.9	4.8	150	11.4	3.8		
	Pulaski	500	8.4	1.1	2,000	9.1	5.2		
18	Baldwin	150	9.7	5.2	400	8.5	3.6		
	Hancock	150	9.6	4.2	1,000	9.6	2.8		
	Johnson	750	7.2	2.5	4,800	9.6	4.5		
	Putnam	600	15.3	7.4	--	11.8	4.3		
	Twiggs	2,500	8.0	4.3	5,000	11.2	5.9		
	Washington	6,000	10.6	2.2	14,000	9.9	3.1		
	Wilkinson	--	9.7	3.1	8,000	13.2	6.1		

1/ Total acres inundated as reported by county committees consisting of representatives from UGA., Cooperative Extension Service, Soil Conservation Service, Ga. Dept. of Natural Resources Game and Fish Division and Georgia Forestry Commission.

2/ Computed from 1972 Georgia forest survey sample plot data. All non-stocked and seedling-sapling stand sizes, all xeric physiographic classes, and three mesic physiographic classes -- bluffs, mountain saddles and moist slopes, and mountain coves were excluded. All southern yellow pine types were grouped as pine type, and all remaining types were grouped as hardwood type. The process used to obtain mutually exclusive board-foot volume per acre and cords volume per acre was based on the Southeastern Forest Experiment Station, USFS Forest Survey, Asheville, North Carolina, best estimate of average log size in sawtimber trees for each of the two types. Estimated average log size was then used to get a board-foot per cubic foot ratio. Average board-foot volume per acre was summarized and equivalent cubic was

Table 2 (Continued)

computed. This computed cubic was subtracted from all growing-stock cubic and the remainder was converted to cords.

Assumptions

	Pine Types	Hardwood Types
Average Log	9" X 12'	12" X 12'
Log Bd. Ft. Volume	36 bd. ft.	69 bd. ft.
Log Cu. Ft. Volume	6.2 cu. ft.	10.6 cu. ft.
Bd. Ft. Per Cu. Ft.	5.8 bd.ft./cu.ft.	6.5 bd.ft./cu.ft.
Cubic Volume Per Cord	65 per cord	70 per cord

The cords factors were selected as most appropriate for converting poletimber-size trees (pulpwood) and upper-stem portions of sawtimber-size trees to cords, which is the cubic volume remaining after the saw-log portions of sawtimber trees are excluded.

3/ U. S. Forest Service figures not available. Volume figures are averages of contiguous counties.



Mortality Caused by Flooding and Feeding on Southern Pines

Table 3.--Figures Used for Computation of Value of Damaged Timber^{1/}

District	Pine			Hardwood		
	: Pulpwood	: Sawtimber	:	Pulpwood	:	Sawtimber
	Cords	MBF	:	Cords	:	MBF
1	\$ 6.00	\$ 36.00		\$ 3.00		\$ 29.00
2	4.00	32.00		2.00		25.00
3	4.00	35.00		2.00		20.00
4	6.00	50.00		3.00		20.00
5	8.00	45.00		2.00		20.00
6	8.00	45.00		3.00		15.00
7	8.00	60.00		3.00		25.00
8	16.00	67.00		3.00		20.00
9	16.00	80.00		5.00		35.00
10	14.00	82.00		4.00		35.00
11	18.00	65.00		5.00		30.00
12	21.00	72.00		4.00		32.00
13	10.00	76.00		3.00		28.00
14	6.00	26.00		3.00		20.00
15	6.00	40.00		2.00		20.00
16	15.00	82.00		5.00		20.00
17	9.00	67.00		4.00		42.00
18	11.00	81.00		5.00		39.00

1/ Average price per district as of May 1975.

Table 4.-- Summary of Landowner Activities

District	: Avg. No. Years : : Beaver Present : No. Landowners District : in District : With Problems	: No. Complaints : Received	: No. Landowners : With A With Control Program
1	13	473	97
2	19	141	67
3	16	112	56
4	18	585	138
5	28	855	209
6	17	222	143
7	26	634	222
8	13	268	126
9	27	250	179
10	11	583	178
11	9	201	72
12	9	18	16
13	19	647	132
14	20	1,443	588
15	23	670	390
16	28	1,096	188
17	25	515	93
18	23	1,275	281
Total		9,988	3,175
			694

Table 5.--Summary of Beaver Damage Control Efforts

Control Method Used	Percent of Total Control Effort										State								
	District																		
Trapping	45	23	16	45	15	64	48	43	34	30	46	19	22	32	34	48	45	26	35
Shooting	13	24	55	30	23	19	8	24	27	12	16	31	32	10	27	21	28	19	23
Dynamiting	30	28	29	25	39	5	24	16	18	43	12	50	27	51	26	22	27	46	29
Drain Pipes	3	--	--	--	3	--	13	7	1	10	5	--	17	--	6	8	--	6	5
Other	9	25	--	--	20	12	7	10	20	5	21	--	2	7	7	1	--	3	8 <u>100%</u>

Fig. 1.--Beaver Present in County

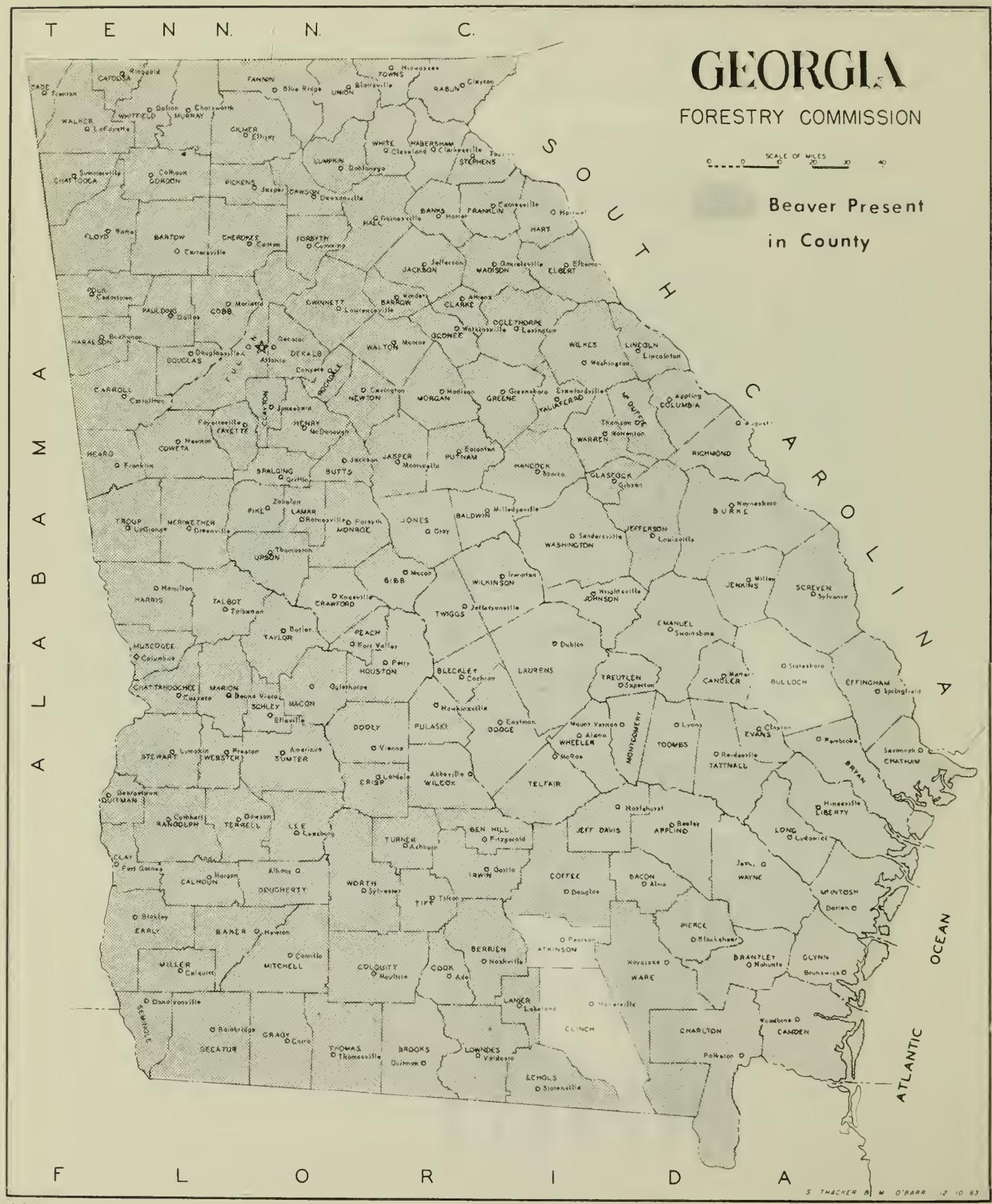


Fig. 2.--Counties Reporting Beaver Caused Problems

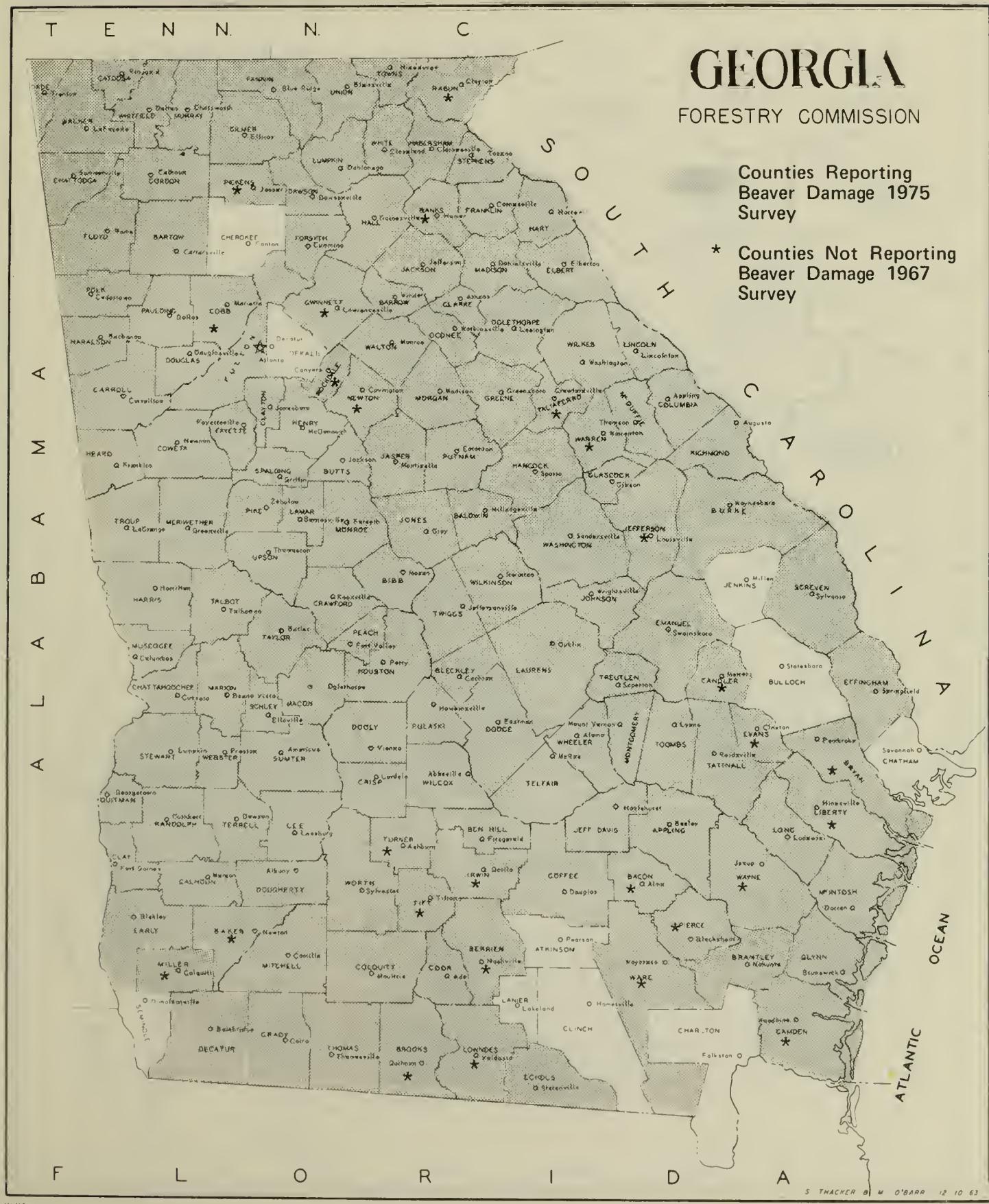


Fig. 3.--Total Acres Inundated by District

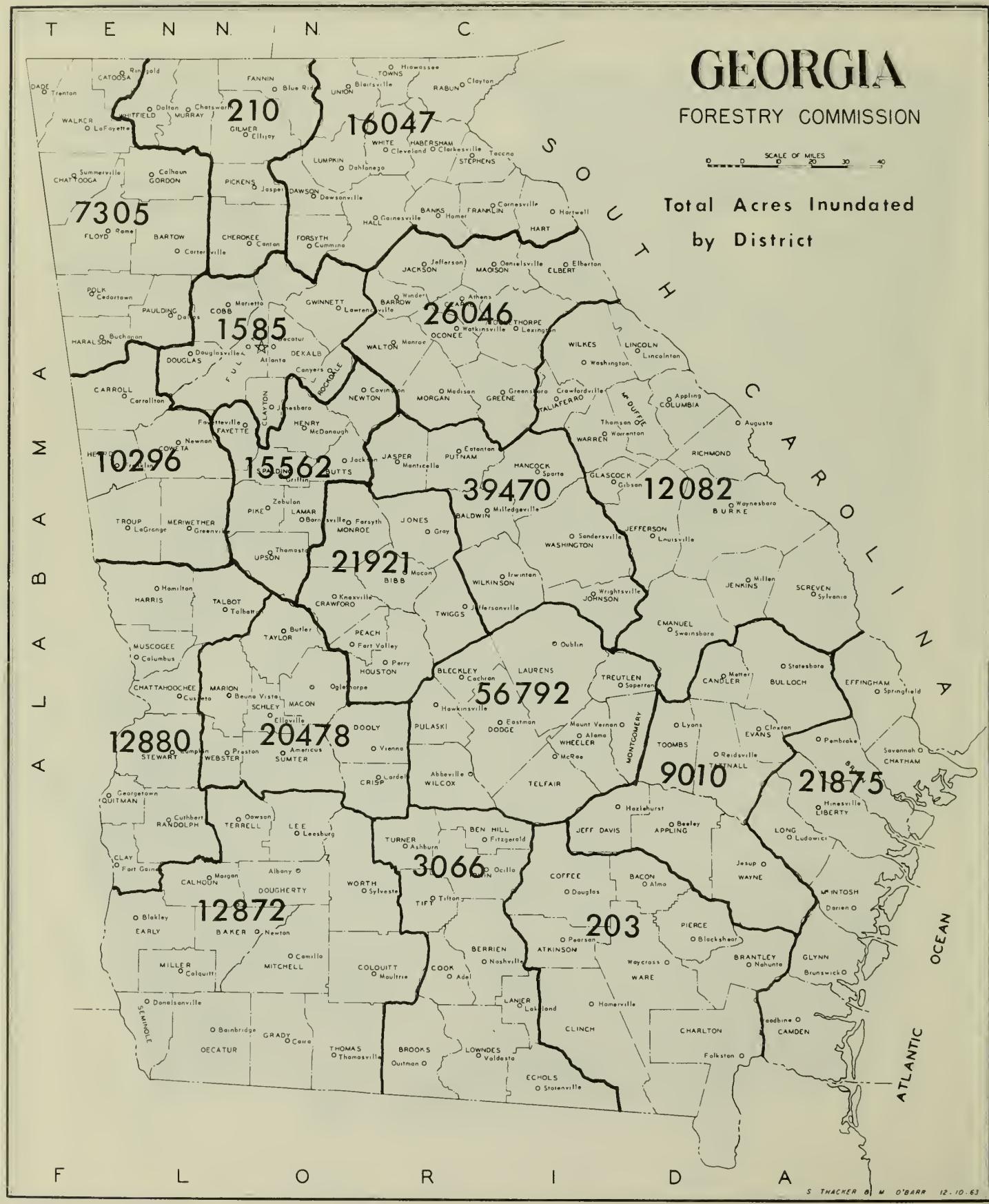


Fig. 4.--Counties Beaver Trapped for Fur

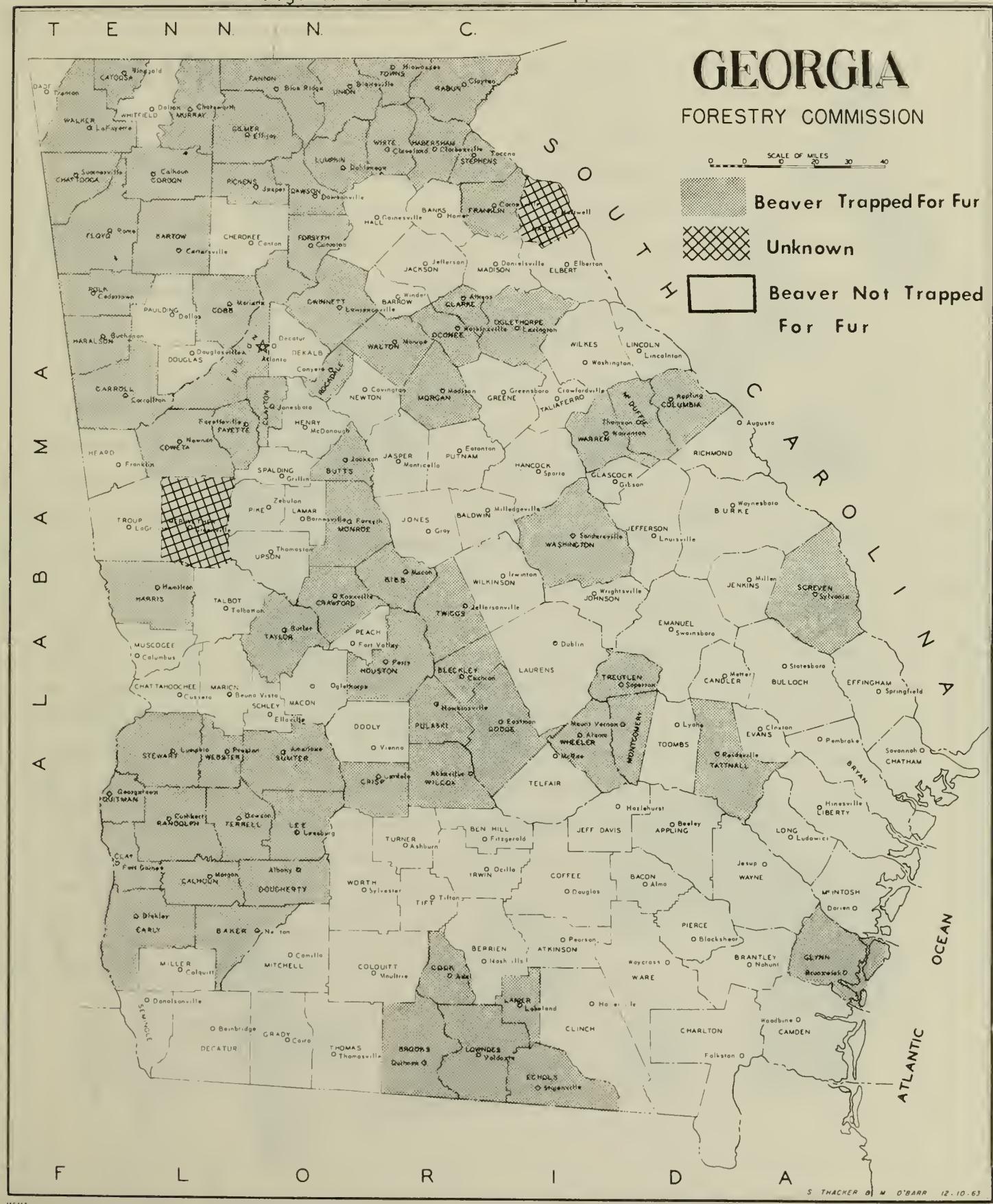


Fig. 5.--Counties Reporting Benefits Exceed the Damages

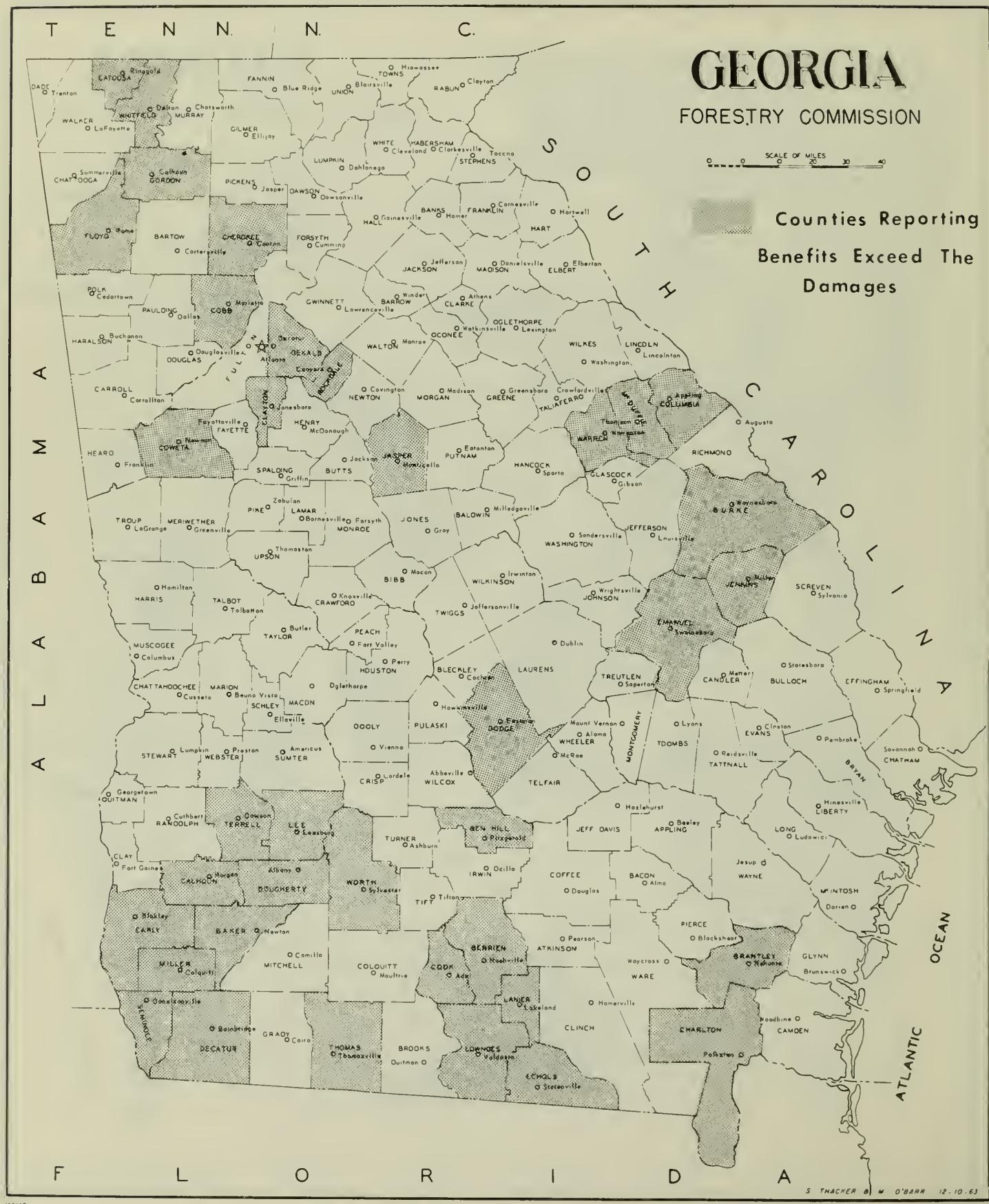


Fig. 6.--Sample Beaver Damage Report Form

County _____ Date _____

1. Are beaver present in your county? No Yes If yes, please answer the following questions.
2. How many years have you known the beaver to exist in your county? _____
3. Have beaver caused problems in your county? No Yes If yes, how many complaints received. _____
4. If you have flooding from beaver colonies in your county, estimate acres involved:

Pine	_____	Reproduction	_____	Urban (Est.No.Dams)	_____	Utility R/W	_____
Hardwoods	_____	Crop Land	_____	Roadways (No.)	_____	Other (Specify)	_____
Pine Hardwoods	_____	Pasture	_____	Railroads (No.)	_____		_____

5. How many landowners have a control program? _____ What methods of control have been used?:
Trapping _____ % of Total Effort Drain Pipes _____ % of Total Effort
Shooting _____ % of Total Effort Other _____ % of Total Effort (Specify) _____
Dynamiting Dams _____ % of Total Effort _____

Which method, if any, was satisfactory? _____

6. Are beaver trapped for fur in your county? No Yes
7. Please estimate the number of landowners in your county that have beaver-associated problems. _____
8. What do you consider the major problems associated with beaver? _____

9. What do you consider the major benefits associated with beaver? _____

10. Do you feel the benefits to wildlife, fish or watershed offset the damages done by beavers? No Yes

NOTE: RETURN COMPLETED FORM TO:

John F. Godbee
Forest Entomologist
Georgia Forestry Commission
Box 819
Macon, Georgia 31202





UNIVERSITY OF GEORGIA LIBRARIES

3 2108 04449 3602

Cost \$711.91
Quantity 2,500